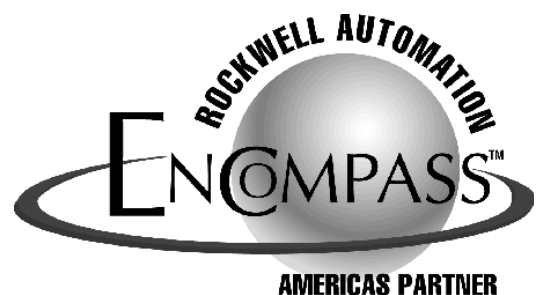




# **Industrial Data Communication Applications Interfacing with Rockwell Automation Equipment**



# Industrial Data Communication Applications Interfacing with Rockwell Automation Equipment

- Encompass Program Member
- Seamless interface with Allen-Bradley PLCs
- Also supports Wireless NetLinx (ControlNet, DeviceNet and others)
- Stand-alone and PLC rack mount modems available—including license-free, frequency hopping spread spectrum modems
- Factory preconfigured for easy installation
- Reliable, worry-free data communication—even in harsh environments

## Introduction

Data-Linc Group designs and manufactures industrial data communication devices. Data-Linc Group is dedicated to providing the broadest line of superior quality, high performance modems, data communications peripherals and systems for any industrial application—including harsh environments that require extended operating temperatures.

## Industries

Data-Linc Group products have been successful in providing continuous data communication in water/wastewater, utility/power, oil/petrochemical, mining/quarrying, transportation, stone/aggregate, cement/concrete, pulp/paper, food, material handling and bio-pharmaceutical industries and other markets.

## Application Engineering

Data-Linc Group provides unsurpassed application engineering and customer service. Data-Linc Group application engineers provide comprehensive

requirements analysis to recommend the best data communication solution possible. Because of this in-depth analysis, Data-Linc Group can custom preconfigure each modem and cable to ensure fast and convenient installation.

Data-Linc Group technical services staff provide unlimited support to ensure complete customer satisfaction. Data-Linc Group can often simulate PLC communication anomalies in their fully equipped support lab to provide fast and easy answers to data communication problems.

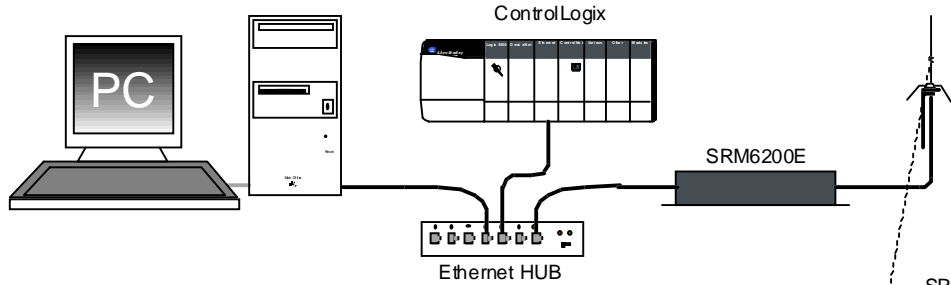
## Compatibility

Data-Linc stand-alone and PLC rack mount modems are ideal for all Rockwell Automation equipment requiring DF1/Channel 0, Serial or TCP/IP Ethernet connectivity.



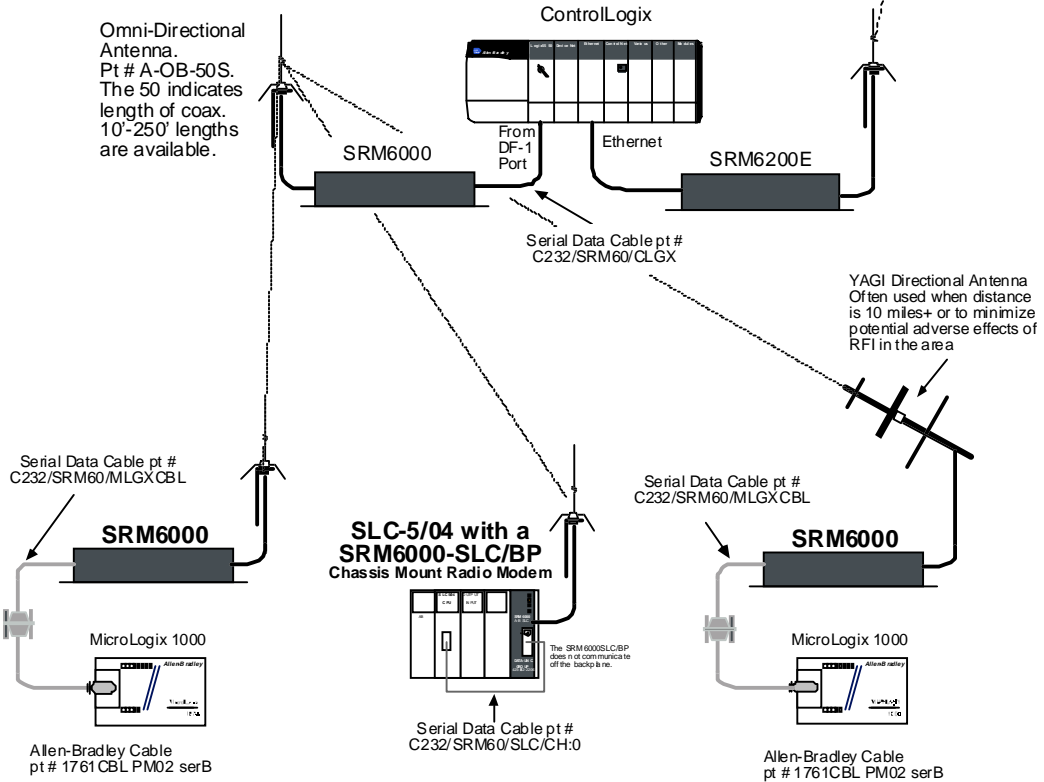
# Basic Data Communication

## Allen-Bradley ControlLogix and other PLCs communicating via Data-Linc Group SRM6200E and SRM6000 Radio Modems



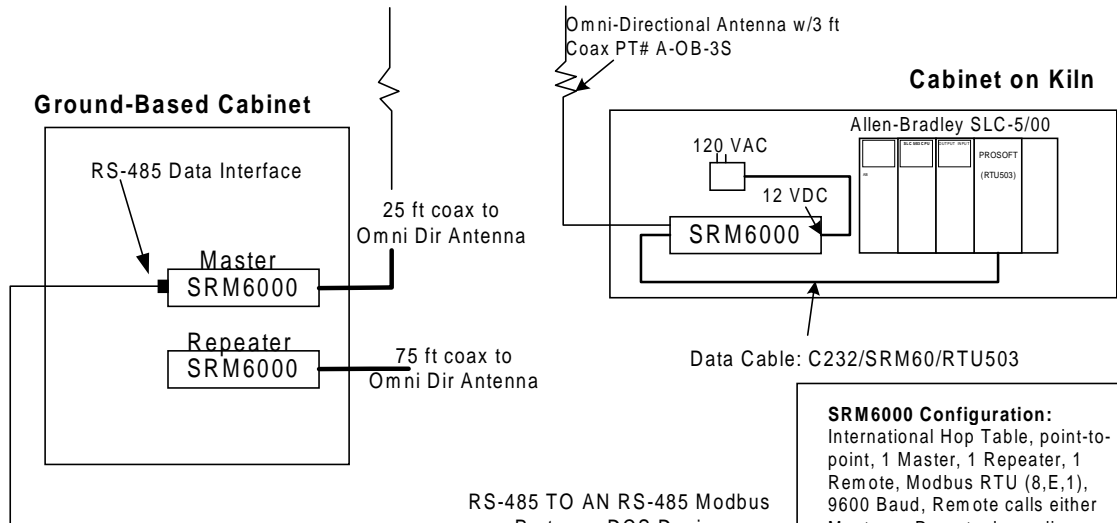
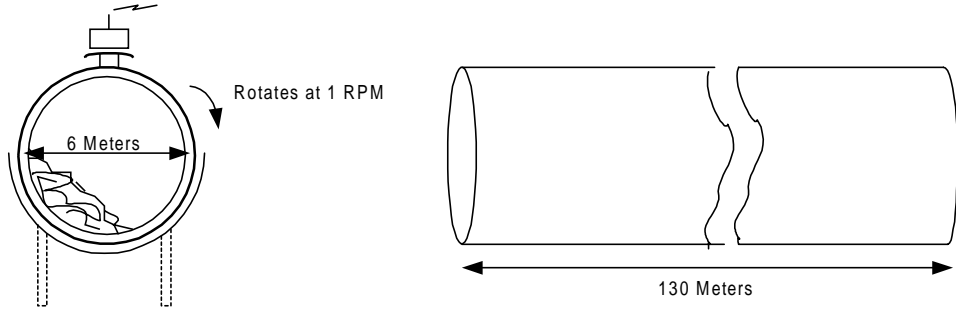
The SRM6200E and SRM6000 are FCC license-free, 902-928 MHz, Spread Spectrum-Frequency Hopping RF Transceivers. Both are designed for demanding applications and harsh environments.

SRM6200E Ethernet Radio Modem Range is 15 miles with LOS Line-of-sight.

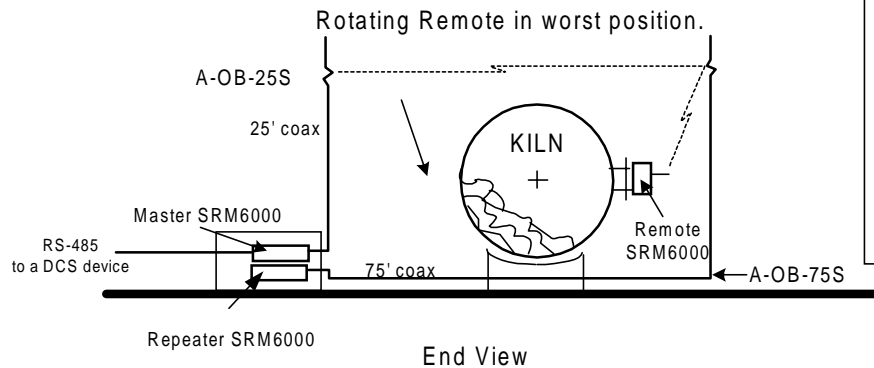


Note: the data cable arrangement from the SRM6000 to the MicroLogix 1000, 1200, and 1500 involves both Data-Linc Groups cable and the Allen-Bradley cable shown above.

**Rotary Kiln with Allen-Bradley SLC 5/00 Controllers and Data-Linc Group SRM6000 Radio Modems**



**SRM6000 Configuration:**  
 International Hop Table, point-to-point, 1 Master, 1 Repeater, 1 Remote, Modbus RTU (8,E,1), 9600 Baud, Remote calls either Master or Remote depending upon which is in synch, standard parameters



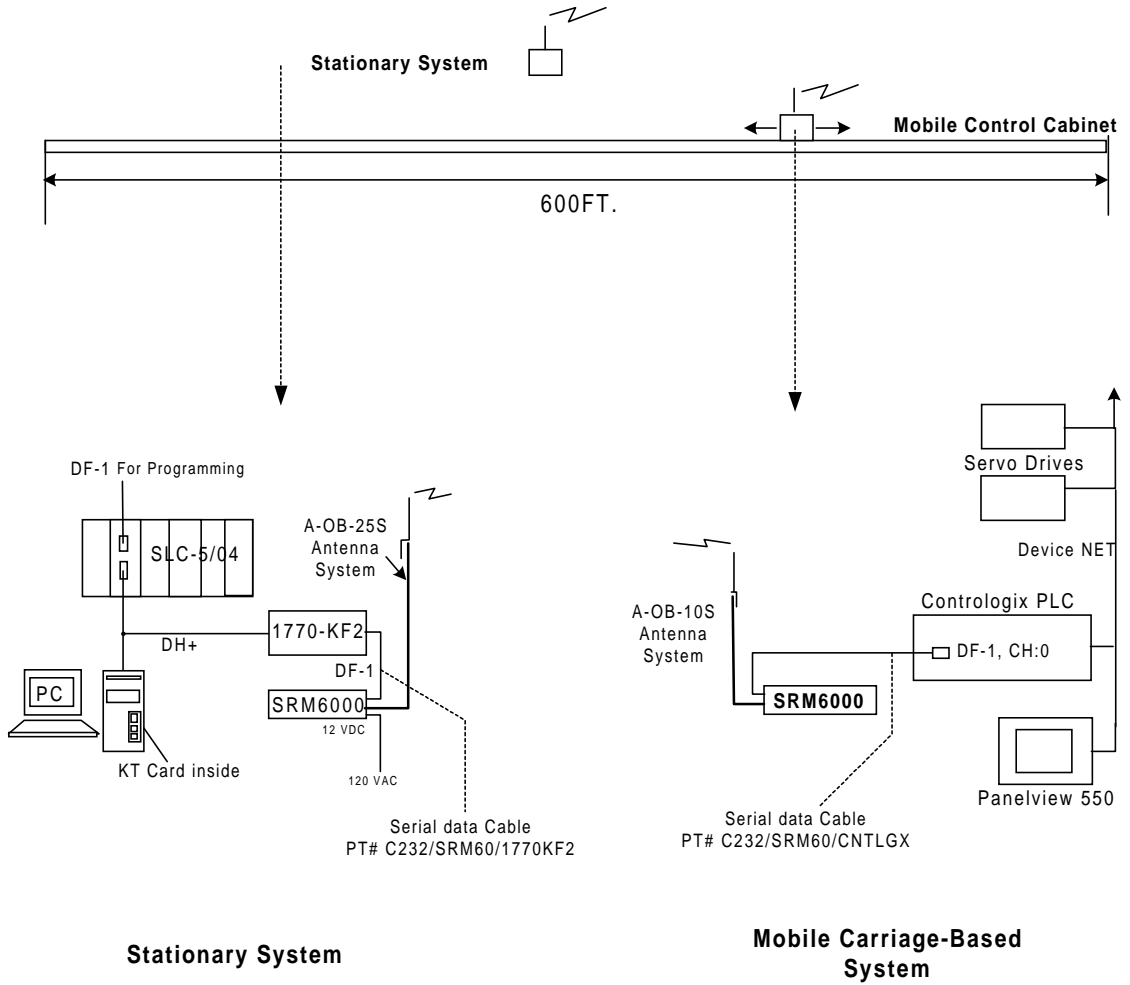
With the Repeater, SRM6000 antenna mounted above the kiln on the opposite side from the Master SRM6000s Antenna Line-of-Sight would be possible when the Remote SRM6000 is in the position shown.

# Seaming Machine

## PLC Controlled Seaming Machine

### Allen-Bradley and Data Communications via Data-Linc Group

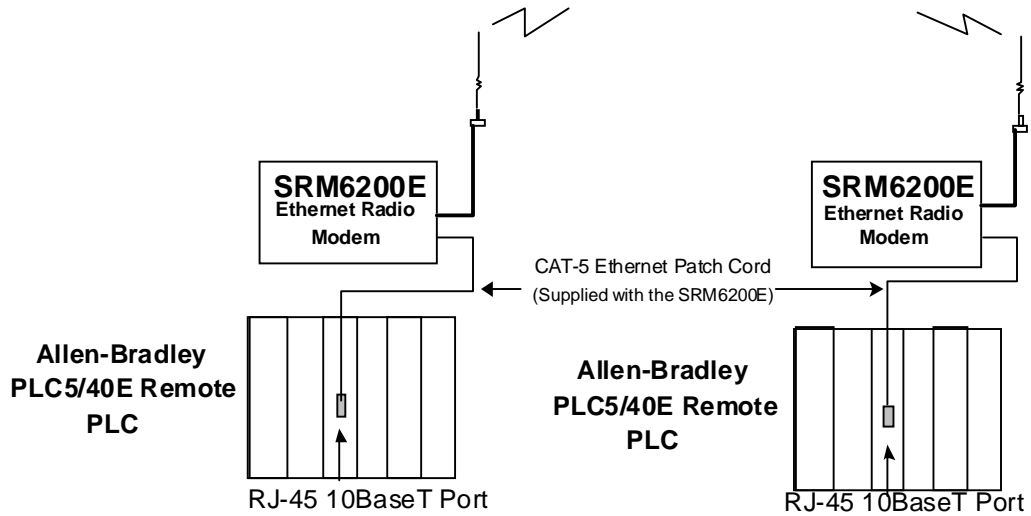
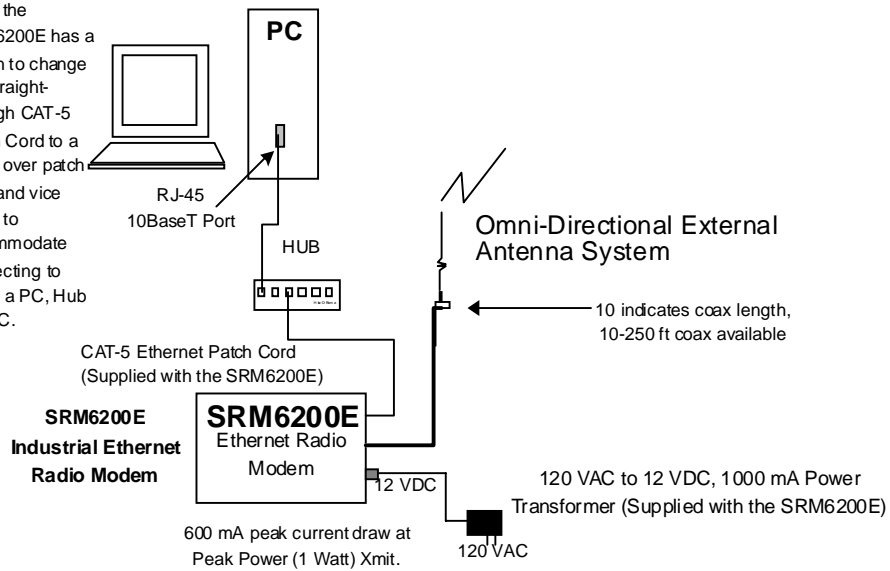
### SRM6000 Radio Modems



# Office-Based LAN

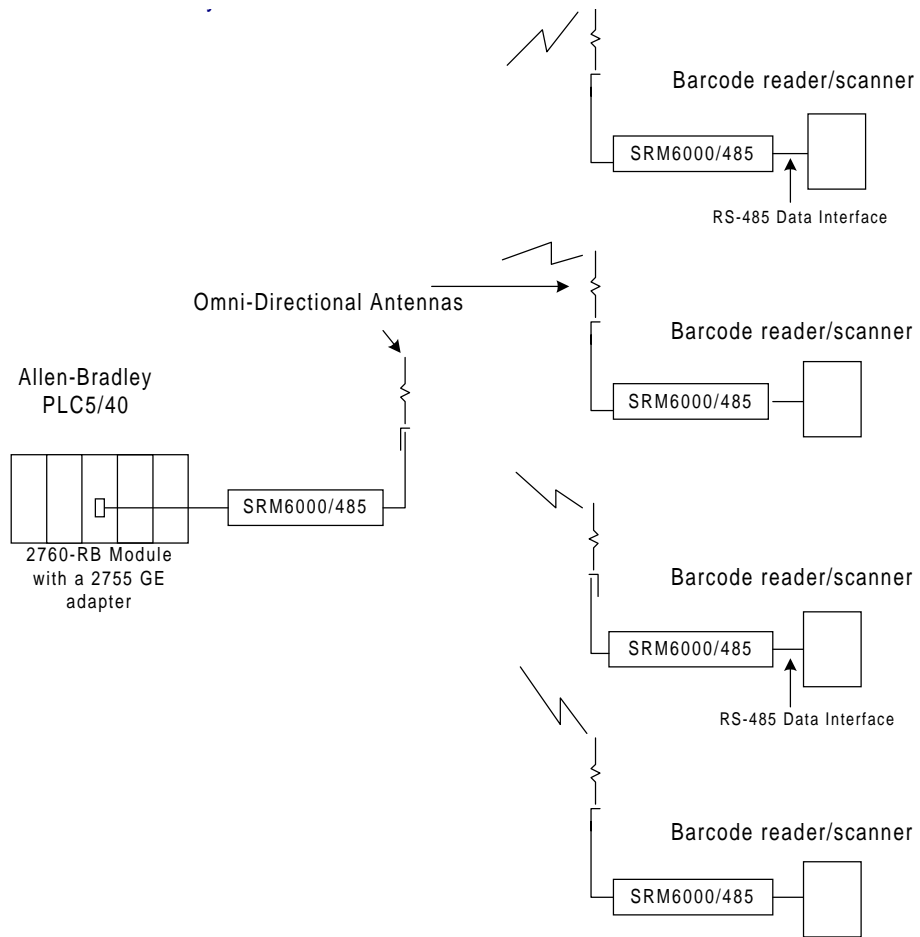
## Data-Linc Group SRM6200E, Allen-Bradley PLC 5/40E and an Office-Based LAN

Note: the SRM6200E has a switch to change the straight-through CAT-5 Patch Cord to a cross over patch cord and vice versa to accommodate connecting to either a PC, Hub or PLC.



# Bar Code Reader/Scanner

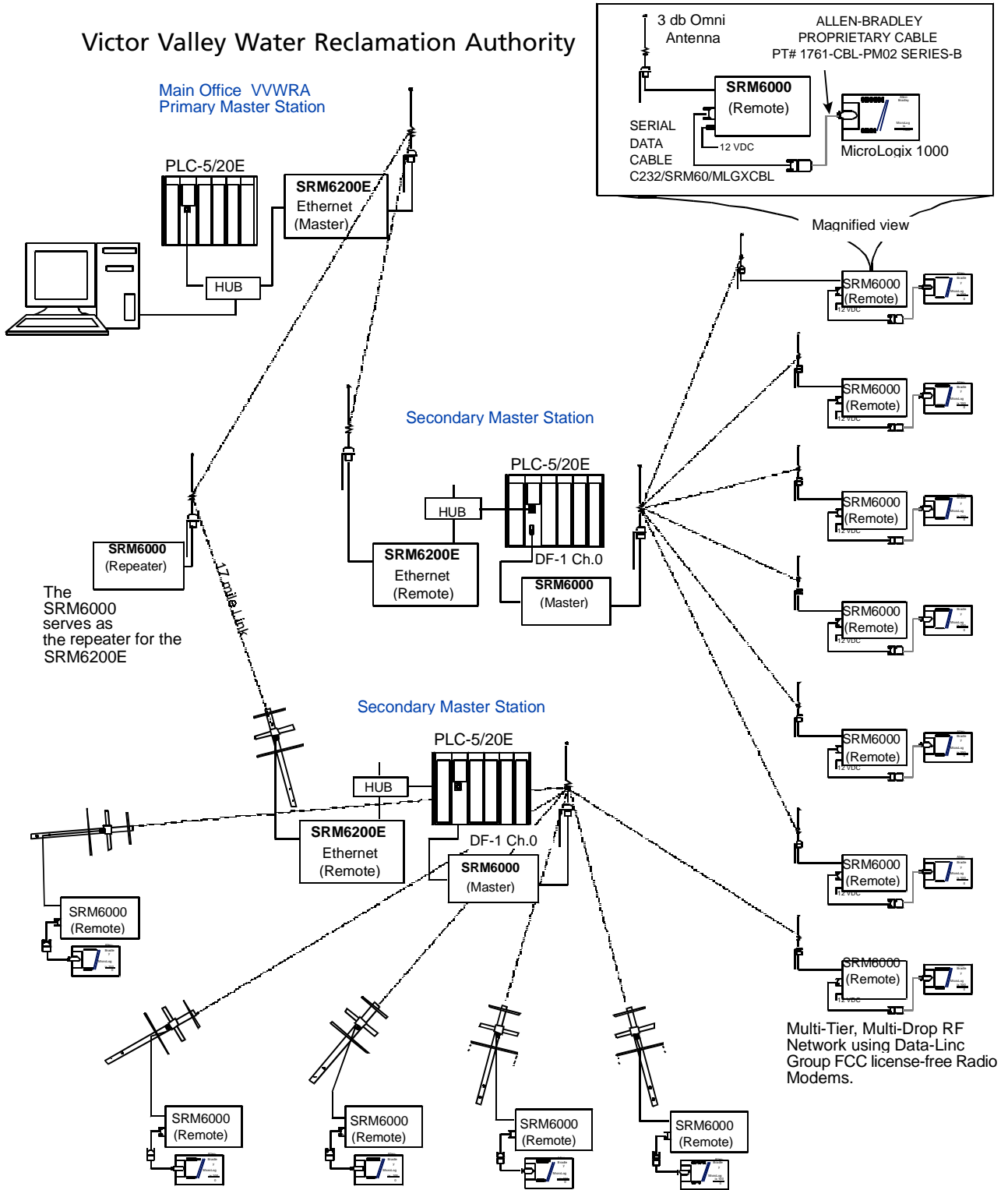
## Allen-Bradley PLC5/40 with an RB Module in Multi-drop Radio Communications and Allen-Bradley Bar Code Reader/Scanners



**DATA-LINC GROUP**  
**SCADA Water Reclamation**

SRM6000 and SRM6200E Radio Modems and Allen-Bradley PLC 5/20E and MicroLogix 1000

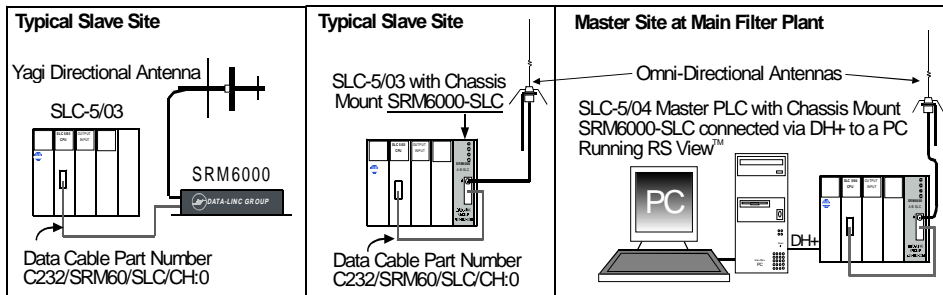
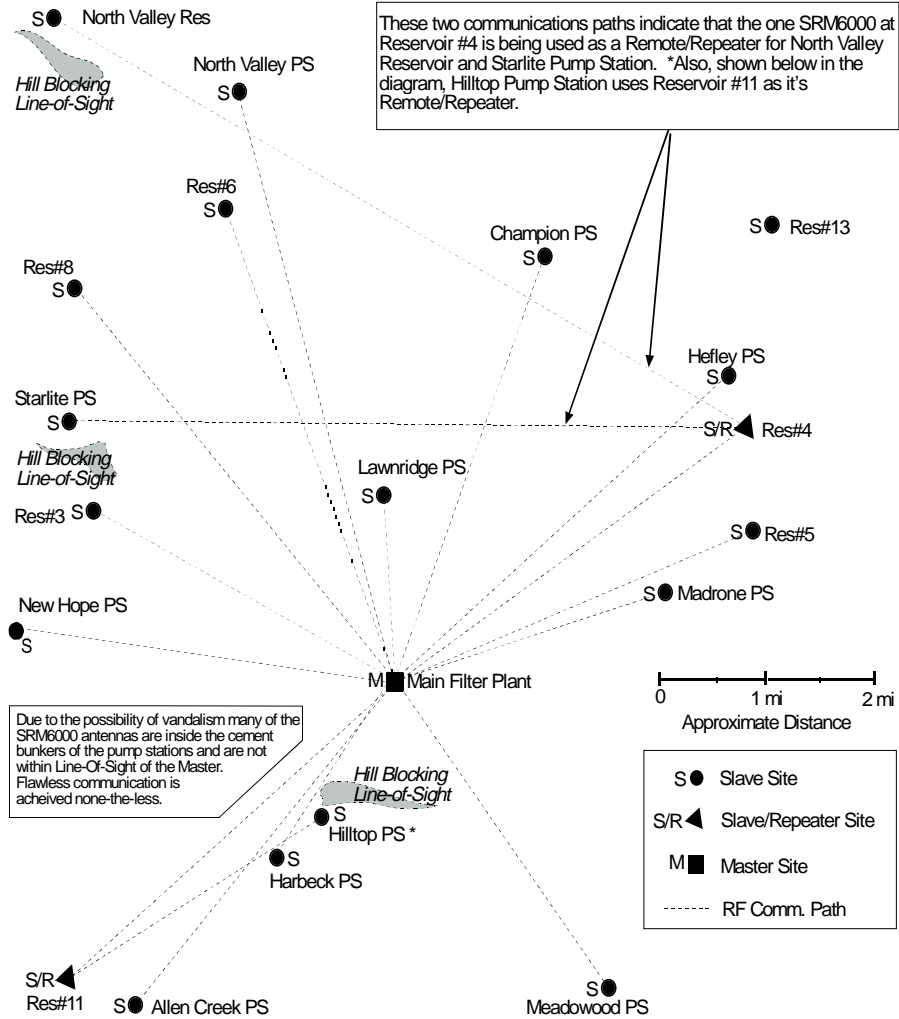
**Victor Valley Water Reclamation Authority**





# DATA-LINC GROUP SCADA Water Distribution

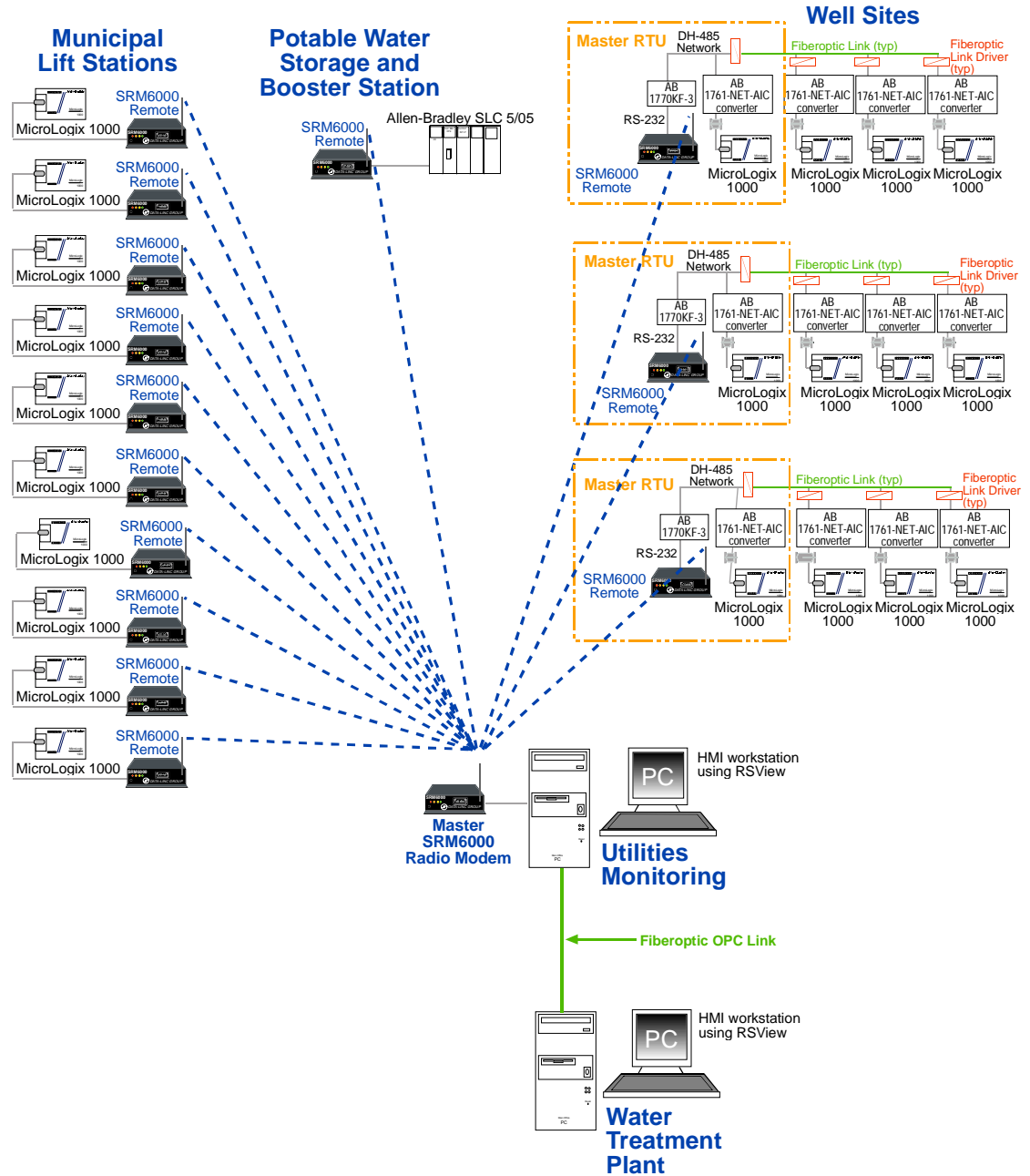
Data-Linc Group SRM6000 Radio Modems and Allen-Bradley SLC 5/03



# Water/Wastewater

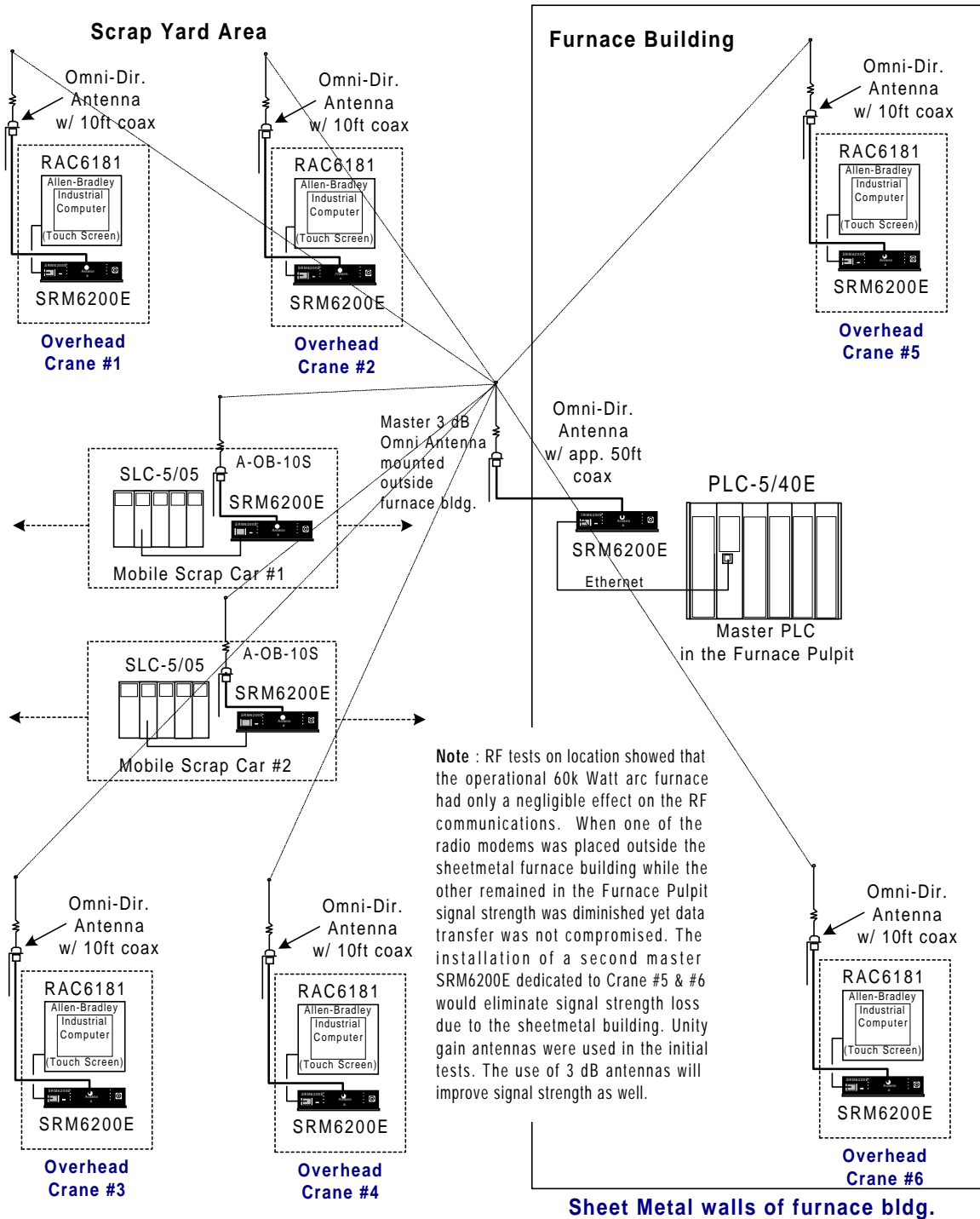
Allen-Bradley MicroLogix and SLC 5/05 communications  
via Data-Linc SRM6000 Radio Modems

St. Augustine Water District, St. Augustine, Florida



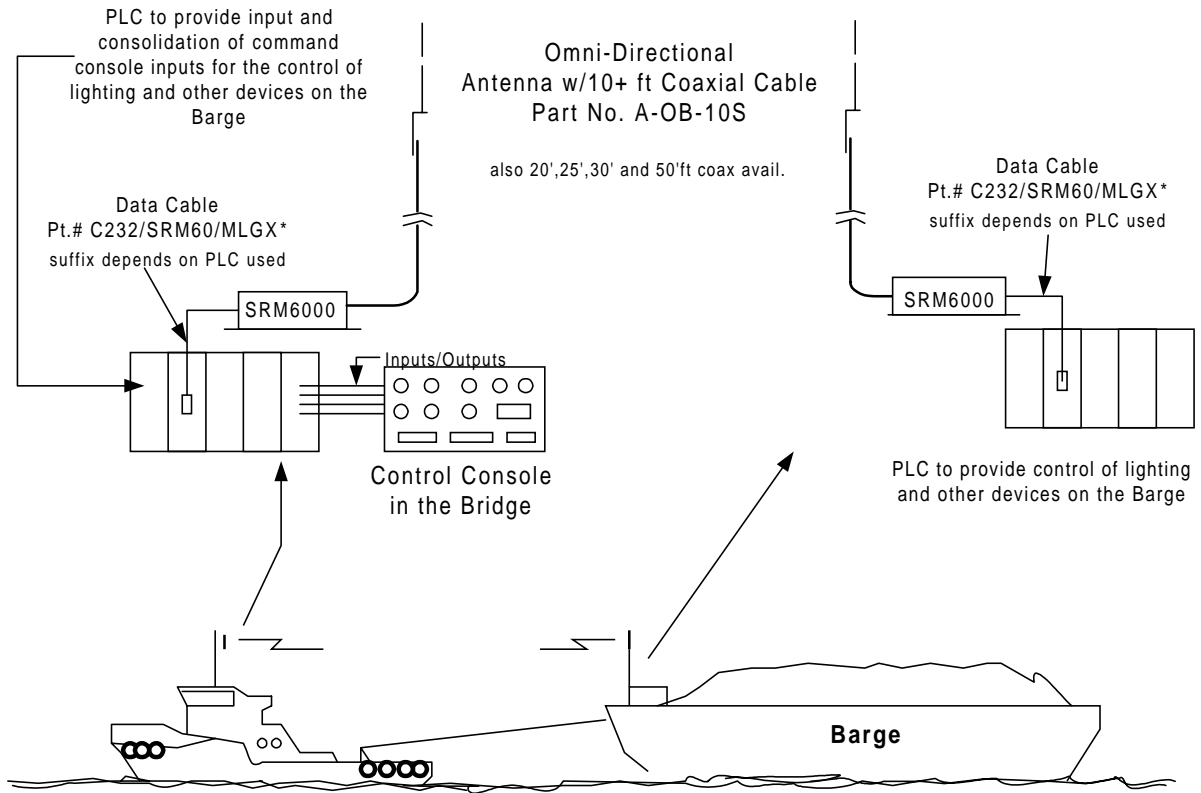
**Steel**

SRM6200E Ethernet Radio Modems and Allen-Bradley Equipment System allows any of six crane operators to control the movement of scrap cars



# Shipping

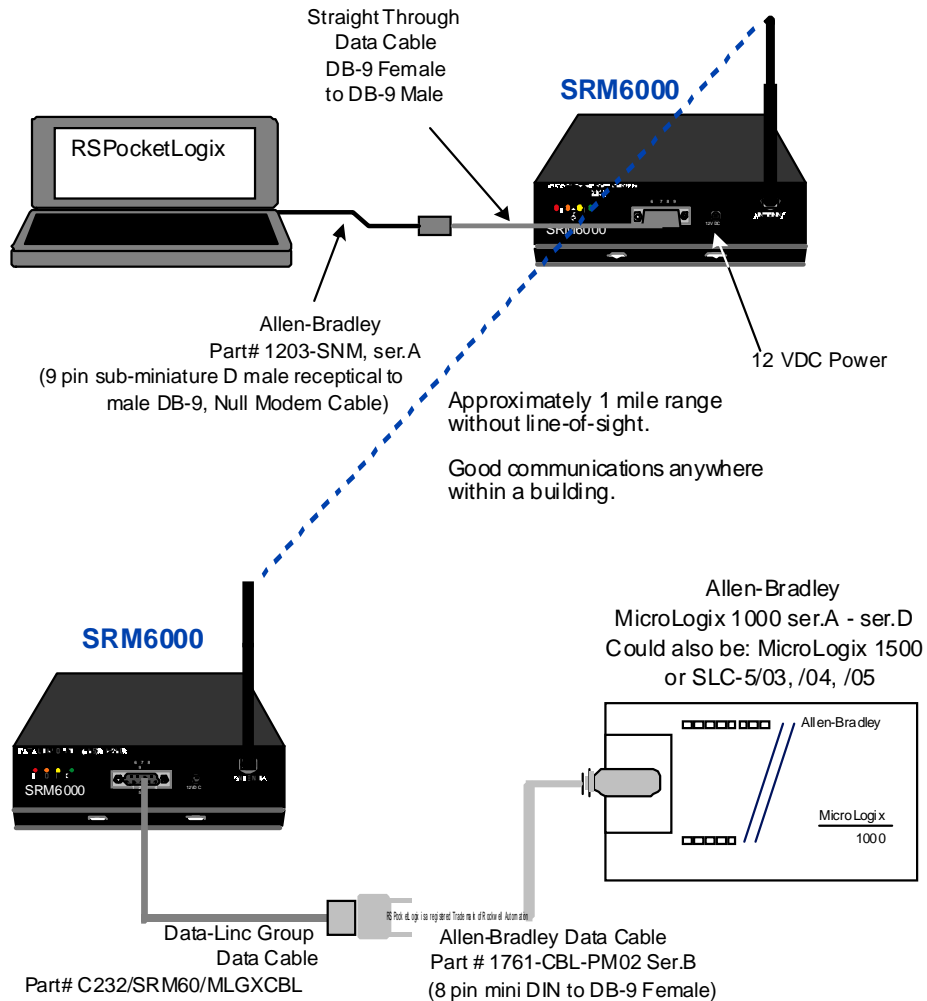
Tug to Barge Data Communications Link  
SRM6000 Radio Modems and Allen-Bradley PLCs





# Wireless RSPocketLogix™

Wireless RF Data Communications using  
Data-Linc Group SRM6000 Radio Modems



The RSPocketLogix® provides serial data access to Allen-Bradley Programmable Controllers. Normally one would hardwire into the PLC. One can also make the connection via a wireless link.

#### SRM6000 Configuration:

Point to Point Master, Slave, 19.2 K Baud (baud rate selectable from 1200 to 115.2 K Baud), 8 Data Bits, No Parity, 1 Stop Bit

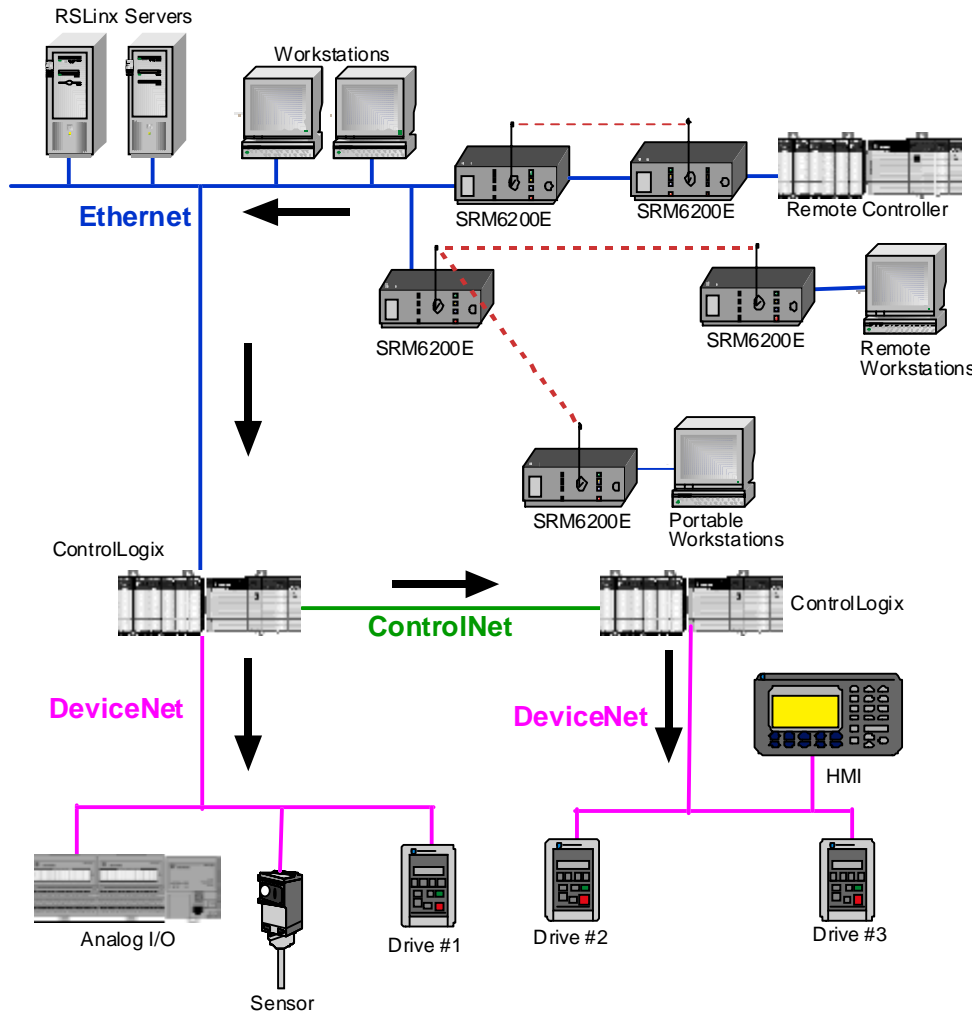
#### Allen-Bradley DF-1 (Full Duplex) Configuration:

Baud Rate = 19200  
Node Address = 1  
Data Bit = 8  
Parity = None  
Stop Bits = 1  
Error Detection = CRC  
DLE NAK Retries = N Retries\*  
DLE ENQ Retries = N Retries\*  
ACK Time-out = 1 sec  
Duplicate Packet Detection = Enabled  
Control Line = No Handshaking  
Embedded Responses = Enabled

\* N=255 for MicroLogix 1000 Series A and B discrete. N=6 for MicroLogix 1000 Series C and later discrete and all MicroLogix 1000 analog.

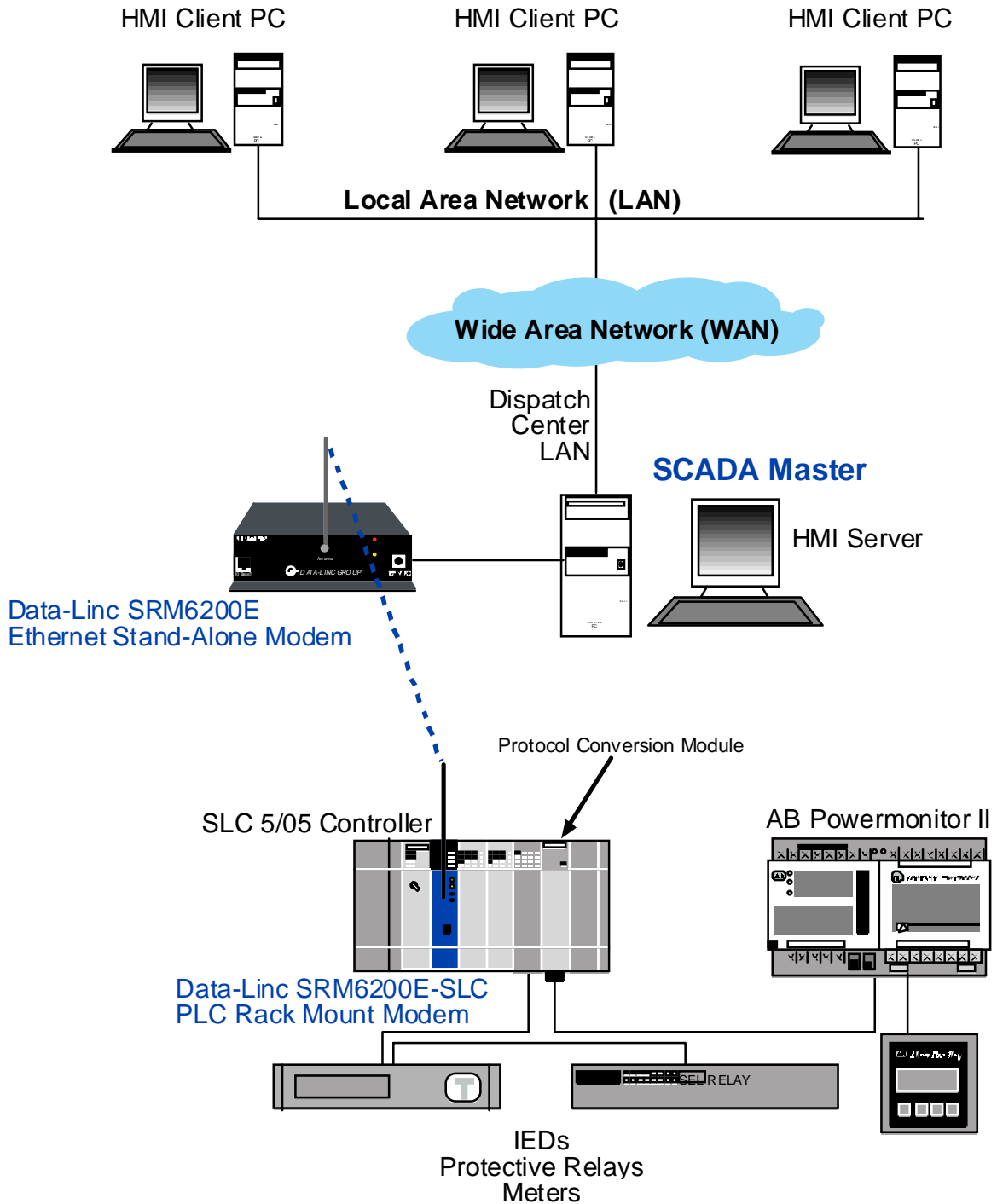
**DATA-LINC GROUP**  
**Wireless NetLinx**

Wireless NetLinx and SRM6200E Ethernet Radio Modems  
(Allen-Bradley DeviceNet and and ControlNet)



# Power/Utility Substation

SRM6200E Ethernet Stand-Alone and PLC Rack Mount Modems and Allen-Bradley SLC 5/05

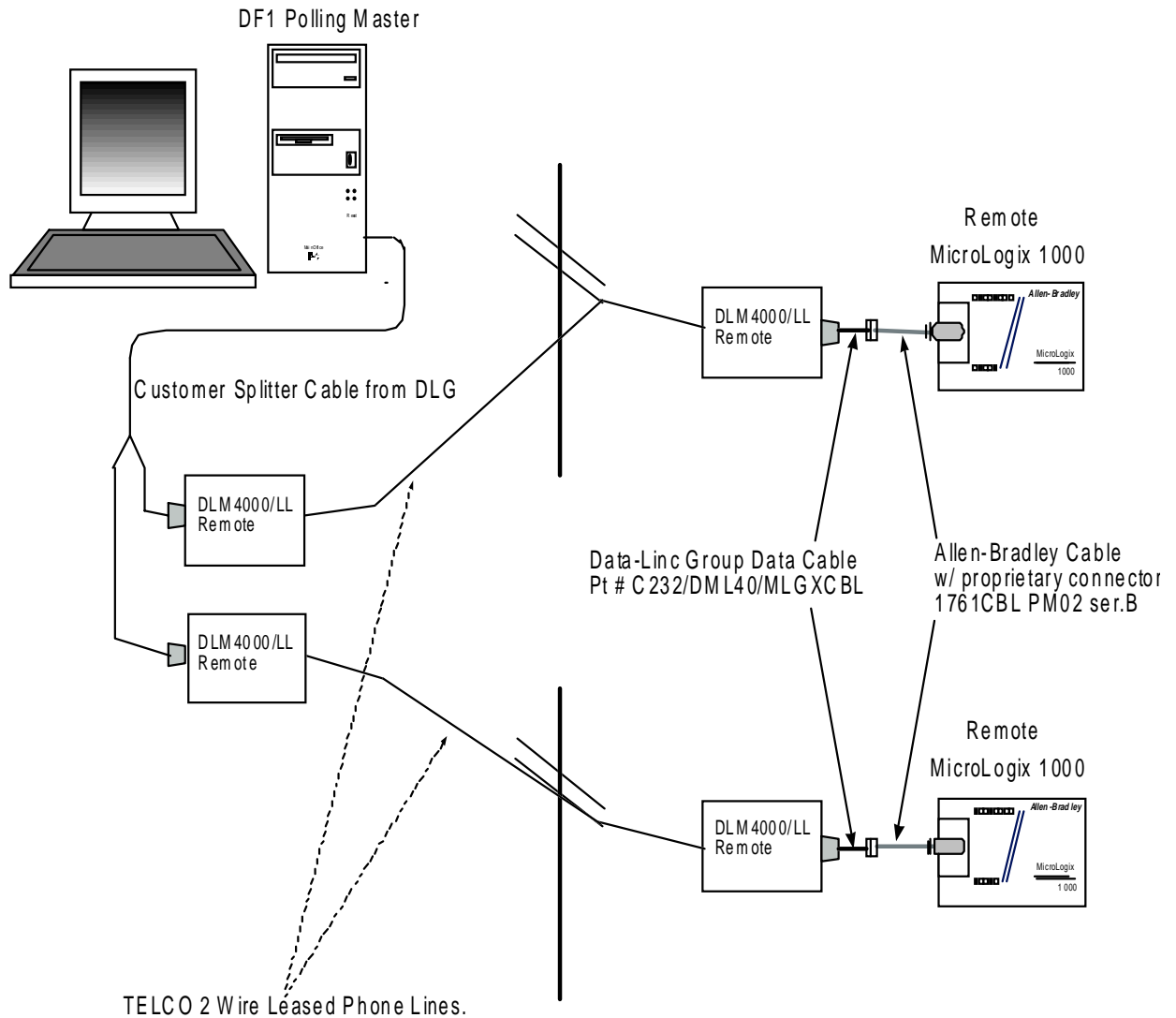




**DATA-LINC GROUP**

# Leased Line Multi-Point Communications at 19.2 Kbaud

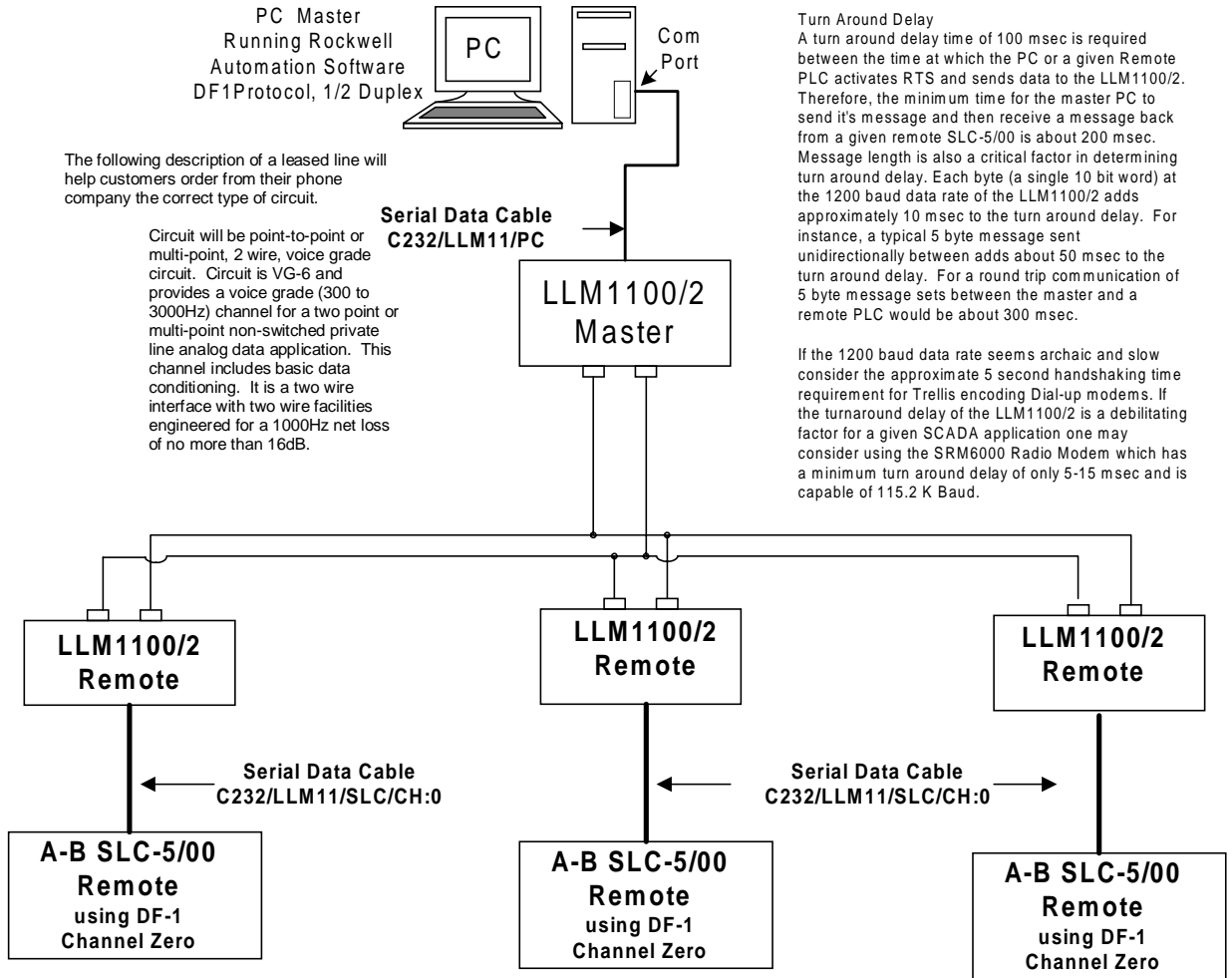
DLM4000/LL Leased Line Modems provide data communications for Allen-Bradley PLCs



There are 2 separate dedicated pairs:  
2 Lines into the Master PC site and  
1 line to each of the Slave sites.

**DATA-LINC GROUP**  
**Leased Line**

LLM1100/2 Telco Leased or Private Line Communications System  
 PC running Rockwell Software and Allen-Bradley SLC 5/00 Remote PLCs



**Additional remote sites can be added.**



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